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NOTICE OF ALLOWANCE AND FEE(S) DUE

73552 7590 07/03/2008

Stolowitz Ford Cowger LLP
621 SW Morrison St
Suite 600
Portland, OR 97205

EXAMINER

CHU, WUTCHUNG

ART UNIT

PAPER NUMBER

2619

DATE MAILED: 07/03/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,253

04/02/2004

Mahesh Chellappa

2705-0737

1787

TITLE OF INVENTION: SYSTEM AND METHOD FOR PROVIDING LINK, NODE AND PG POLICY BASED ROUTING IN PNNI BASED ATM NETWORKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1440	\$0	\$0	\$1440	10/03/2008

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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73552 7590 07/03/2008

Stolowitz Ford Cowger LLP
621 SW Morrison St
Suite 600
Portland, OR 97205

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,253 04/02/2004 Mahesh Chellappa 2705-0737 1787

TITLE OF INVENTION: SYSTEM AND METHOD FOR PROVIDING LINK, NODE AND PG POLICY BASED ROUTING IN PNNI BASED ATM NETWORKS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
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nonprovisional NO \$1440 \$0 \$0 \$1440 10/03/2008

EXAMINER	ART UNIT	CLASS-SUBCLASS
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CHU, WUTCHUNG 2619 370-351000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,253	04/02/2004	Mahesh Chellappa	2705-0737	1787
73552	7590	07/03/2008	EXAMINER	
Stolowitz Ford Cowger LLP 621 SW Morrison St Suite 600 Portland, OR 97205			CHU, WUTCHUNG	
			ART UNIT	PAPER NUMBER
			2619	
DATE MAILED: 07/03/2008				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 643 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 643 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability

Application No.

10/817,253

Applicant(s)

CHELLAPPA ET AL.

Examiner

WUTCHUNG CHU

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/12/2008.
2. ☒ The allowed claim(s) is/are 39-42, 45-49 and 52.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>4/10/2008</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

DETAILED ACTION

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to teach the combination limitations of:

Regarding claim 39, an apparatus for processing a call having associated therewith a remotely-computed virtual circuit, comprising:

- one or more processors; and
- a memory containing instructions executable by the processors, the processors when executing the instructions operable to:
 - receiver, at an intermediary node that comprises part of the remotely-computed virtual circuit, a service request for the call, the service request sent according to a protocol standard;
 - analyze an intermediary node, the contents of the service request to identify any information elements marked as optional extensions to the protocol standard;
 - process the identified information elements at the intermediary node to determine whether there is included therein an indication of whether at least one link type selected from the group comprising encrypted links, satellite links, and public infrastructure links is preferred or non-preferred for the call;

- if the indication is included, compare a table stored on the intermediary node to routing information for the remotely-computed virtual circuit to determine whether links that are within intermediary node's flooding group and utilized by the remotely-computed virtual circuit correspond to the indication; and
- assign new virtual circuit for the call if the comparison indicates that the remotely-computed virtual circuit does not correspond to the indication, the new virtual circuit using at least one link from the intermediary node's flooding group that was not included in the remotely-computed virtual circuit;
- wherein the service request is interoperable with both intermediary nodes that are configured for support with the organization's optional extension and intermediary nodes that support the asynchronous transfer mode protocol but are not configured with support for the organization's optional extension;
- wherein the information element of the service request comprises:
- a predefined application type field to indicate that the information element is associated with an optional extension to the asynchronous transfer mode protocol; and
- a pass along bit to prevent nodes that do not understand the information element from dropping or rejection the signaling message.

Regarding claim 46, an apparatus for processing a call having associated therewith a remotely-computed virtual circuit, comprising:

- one or more processors; and
- a memory containing instructions executable by the processors, the processors when executing the instructions operable to:
- receive, at a border node of a flooding domain that comprises part of the remotely-computed virtual circuit, a service request for the call, the service request sent according to a protocol standard;
- analyze, at the border node, the contents of the service request to identify any information elements marked as optional extensions to the protocol standard;
- process the identified information elements at the border node to determine whether there is included therein an indication of whether at least one link type selected from the group comprising encrypted links, satellite links, public infrastructure links, policy links, or predefined quality of service links is preferred or non-preferred for the call;
- if the indication is included, compare ~ a topology database stored on the border node to routing information for the remotely-computed virtual circuit to determine whether links that are within the border node's flooding domain and utilized by the remotely-computed virtual circuit corresponds to the indication; and
- assign a new virtual circuit for the call if the comparison indicates that the remotely-computed virtual circuit does not correspond to the indication, the new virtual circuit using at least one link from the border node's flooding domain, the

assigned link being one that was not included in the remotely-computed virtual circuit;

- wherein the service request is interoperable with both border nodes that are configured for support with the organization's optional extension and border nodes that support the asynchronous transfer mode protocol but are not configured with support for the organization's optional extension;
- wherein the information element of the service request comprises:
- a predefined application type field to indicate that the information element is associated with an optional extension to the asynchronous transfer mode protocol; and
- a pass along bit to prevent nodes that do not understand the information element from dropping or rejecting the signaling message.

Bertin et al. (US6934249) disclose a system for minimizing the connection set up time in high speed packet switching networks. The system for minimizing the time to establish a connection between an origin and a destination node. Due to high dynamicity of the traffic on transmission links, it is important to select a routing path according to a fully up-to-date information on all network resources. The simpler approach is to calculate a new path for each new connection request. This solution may be very time consuming because there are as many path selection operations as connection set up operations. On another hand, the calculation of paths based on an exhaustive exploration of the

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network topology, is a complex operation which may also take an inordinate amount of resources in large networks. Many of connections originated from a network node flow to the same destination network node. It is therefore possible to take a serious benefit in reusing the same already calculated paths for several connections towards the same node. The path calculated at the time the connection is requested is recorded in a Routing Database and updated each time a modification occurs in the network.

Furthermore, alternate paths for supporting non-disruptive path switch on failure or preemption, and new paths towards potential destination nodes can be calculated and stored when the connection set up process is idle. These last operations are executed in background with a low processing priority and in absence of connection request.

However, Bertin fails to teach the combination limitations of:

- assign a new virtual circuit for the call if the comparison indicates that the remotely-computed virtual circuit does not correspond to the indication, the new virtual circuit using at least one link from the border node's flooding domain, the assigned link being one that was not included in the remotely-computed virtual circuit;
- wherein the service request is interoperable with both border nodes that are configured for support with the organization's optional extension and border nodes that support the asynchronous transfer mode protocol but are not configured with support for the organization's optional extension;
- wherein the information element of the service request comprises:

- a predefined application type field to indicate that the information element is associated with an optional extension to the asynchronous transfer mode protocol; and
- a pass along bit to prevent nodes that do not understand the information element from dropping or rejecting the signaling message.

Barri et al. (US2003/0081608) discloses Method for distributing load over multiple shared resources in a communication network and network applying such a method. Which the method applies to a telecommunication network having IP packet-supporting capabilities when said network includes a load distribution processing function which is either centralized or distributed and by means of which a load distribution function is applied to sets of paths between network nodes and/or sets of links of network trunks. The load distribution processing function handles different load distribution functions, and each of the different load distribution functions is associated to a different network input unit involved in the load distribution for at least a determined set of paths between network nodes or a determined set of trunk links. However, Barri fails to teach the combination limitations of:

- assign a new virtual circuit for the call if the comparison indicates that the remotely-computed virtual circuit does not correspond to the indication, the new virtual circuit using at least one link from the border node's flooding domain, the assigned link being one that was not included in the remotely-computed virtual circuit;

- wherein the service request is interoperable with both border nodes that are configured for support with the organization's optional extension and border nodes that support the asynchronous transfer mode protocol but are not configured with support for the organization's optional extension;
- wherein the information element of the service request comprises:
- a predefined application type field to indicate that the information element is associated with an optional extension to the asynchronous transfer mode protocol; and
- a pass along bit to prevent nodes that do not understand the information element from dropping or rejecting the signaling message.

Therefore, claims 39-42, 45-49, and 52 are allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WUTCHUNG CHU whose telephone number is (571)270-1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/
Wutchung Chu

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619